

REMARKS/ARGUMENTS

Reexamination of the captioned application is respectfully requested.

A. SUMMARY OF THIS AMENDMENT

By the current amendment, Applicant basically:

1. Editorially amends the specification.
2. Provides Replacement Sheets for amending Figures 3, 4(b), 5 and 6.
3. Amends claims 1-3 and 6, without prejudice or disclaimer or without acquiescing in the objection or the rejections.
4. Adds new claims 7-19.
5. Respectfully traverses all objections and rejections.

B. REPLACEMENT DRAWINGS

Replacement sheets for Figs. 3, 4(b), 5 and 6 are electronically submitted on even date herewith. The replacement sheets replace the original sheets including Figs. 3, 4(b), 5 and 6.

In the replacement sheet for Fig. 3, Fig. 3 has been amended to depict control portion/control means 93 and warning means 94, as well as the respective connections between control portion/control means 93, warning means 94, light emitting portion 71, light receiving portion 72, solenoid 85 and the user. Support for this amendment can be found in the specification at least at page 8, line 30 to page 9, line 11 and page 22 line 10 to page 23, line 6.

In the replacement sheet for Fig. 4(b), Fig. 4(b) has been amended to include the previously omitted word “paper” in the caption along the x-axis of the graph. Support for this amendment can be found in the specification at least at page 20, lines 18-30.

In the replacement sheet for Fig. 5, Fig. 5 has been amended to depict control portion/control means 93 and warning means 94, as well as the respective connections between control portion/control means 93, warning means 94, light emitting portion 71, light receiving

portion 72, solenoid 85 and the user. Support for this amendment can be found in the specification at least at page 8, line 30 to page 9, line 11 and page 22 line 10 to page 23, line 6.

In the replacement sheet for Fig. 6, Fig. 6 has been amended to depict control portion/control means 93 and warning means 94, as well as the respective connections between control portion/control means 93, warning means 94, the sheet quantity confirming means, solenoid 85 and the user. Support for this amendment can be found in the specification at least at page 8, line 30 to page 9, line 11 and page 22 line 10 to page 23, line 6.

C. PATENTABILITY OF THE CLAIMS

Claims 1-2 and 5-6 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Masako (JP Publication No. 2000-313533 English Translation (“Masako”)) in view of Keiji (JP Publication No. 62-111851 (“Keiji”)). Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Masako in view of Keiji, and in further view of Ayuba (JP Patent No. 408157104 (“Ayuba”)). Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Masako in view of Keiji, and in further view of Nobusuke (JP Publication No. 2000-335784 (“Nobusuke”)). All prior art rejections are respectfully traversed.

The applied cited references do not disclose at least the feature recited in claim 1 of withholding execution/commencement of the requested image forming job if the number of paper sheets contained in the paper feed cassette is determined to be insufficient to complete that image forming job. Note specifically that independent claim 1 includes the following limitation:

if the number of sheets of the recording medium stored in the paper feed cassette is lower than the number of sheets necessary to complete an image forming operation in accordance with the image forming request, the control means causes the paper feed cassette to be pushed out from an installed state toward an uninstalled state by the push-out means *without executing the image forming operation*

See also the following limitation in independent claims 7 and 9:

wherein said image forming apparatus is further configured to *withhold execution of said image forming job* if the number of paper sheets contained in the paper feed cassette is insufficient to complete said image forming job in response to said image forming request

as well as the following limitation from new independent claim 10:

providing, prior to execution of an image forming job in response to an image forming request, a warning at a terminal machine in communication with said image forming apparatus that the number of paper sheets contained in the paper feed cassette is insufficient to complete said image forming job in response to said image forming request

At best, Masako discloses pushing out the paper feed cassette when the cassette is emptied. Masako not does *not* appear to disclose pushing out the cassette *before commencing the print job* merely because the cassette does not contain sufficient paper to complete the requested job.

Similarly, although Keiji discloses providing a warning of insufficient paper, Keiji does not appear to disclose withholding commencement of the image forming job based on insufficient paper.

Nor do the applied references disclose the feature recited in, e.g., amended claim 2 that the image forming request is received from a terminal machine and that the warning is provided at the terminal machine.

Nor do the applied references disclose the particular reflective optical sensor recited in claim 3. The sensor disclosed in Ayuba is arranged such that a light emitting part 23 is positioned adjacent one side of the paper feeding cassette 10, and a light receiving part 24 is positioned adjacent an opposing side of paper feeding cassette 10. When, as a result of paper consumption, paper feeding cassette 10 for Ayuba reaches a particular height, light from light emitting part 23 is permitted to pass through to light receiving part 24, thus indicating that the remaining amount of paper is small. Ayuba at Abstract, FIGS. 2, 3. Thus, the Ayuba sensor does not appear to use reflected light to determine the amount of remaining paper or the height of

any paper storage board. Nor does Ayuba appear to compare the remaining amount of paper to the amount of paper needed to complete a print job. Moreover, the Ayuba sensor does not appear to be provided as part of the paper feed cassette.

Nor do the applied references disclose a paper feed cassette comprising the electrical-resistance feature for determining the amount of paper remaining in the paper feed cassette, as recited in claim 4. In particular, the sheet residual quantity detection part 9 disclosed in Nobusuke appears to be outside of the sheet cassette 6. Nobusuke at Abstract, Figs. 1-4.

D. MISCELLANEOUS

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly solicited.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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